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Dieter Groezinger

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EXAMINER

LIN, KUANG Y

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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/591,198
Filing Date: August 30, 2006
Appellant(s): GROEZINGER, DIETER

Martin R. Geissler
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed August 21, 2009 appealing from the Office action mailed April 6, 2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

1,196,096	BELYAKOV ET AL.	12-1985
2,878,539	HALPERN ET AL.	3-1959

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3,764,575	ANDERKO ET AL.	10-1973
5,573,055	MELLING ET AL.	11-1996

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over SU 1,196,096 and further in view of US 2,878,539 to Halpern et al.

SU '096 substantially shows the invention as claimed except that it does not disclose to apply compact pressure and use graphite parting agent in the foundry process. However, it is conventional to use a compact molding machine or pressure blowing machine for pressuring the foundry mixture during core making process. Thus, it would have been obvious to use a compact molding machine or pressure blowing machine for forming core of SU '096 in view of the conventional practice. Further, Halpern et al. show (see, col. 2, lines 28-35) that it is conventional to incorporate graphite as parting agent in the mold mixture to facilitate the foundry process. The purpose of adding parting agent to the foundry mix is to prevent molding material sticking to the casting and thus facilitate the removal of mold and core from the cast product. It would have been obvious to incorporate graphite in the mold mixture of SU '096 in view of the advantage.

2. Claims 1, 2 and 4-7 are also rejected under 35 U.S.C. 103(a) as being unpatentable over US 3,764,575 to Anderko et al. and further in view of US 5,573,055 to Melling et al. and US 2,878,539 to Halpern et al.

Anderko substantially shows the invention as claimed except that it use resin, instead of phosphate, as a binder and does not disclose the use of graphite parting agent. However, Melling shows to use phosphate and/or borate as a binder to avoid the use of any organic materials which would volatize or burn out when the mold is heated at high temperatures (see, for example, col. 4, lines 4-7). It would have been obvious to use the phosphate and borate binder of Melling in the water soluble salt core of Anderko in view of the advantage. Further, Halpern et al. show (see, col. 2, lines 28-35) that it is conventional to incorporate graphite as parting agent in the mold mixture to facilitate the foundry process. The purpose of adding parting agent to the foundry mix is to prevent molding material sticking to the casting and thus facilitate the removal of mold and core from the cast product. It would have been obvious to incorporate graphite in the mold mixture of Anderko et al. in view of the advantage.

(10) Response to Argument

Appellant in page 4, second paragraph and page 5, third paragraph of the appeal brief stated that Halpern discloses a sand-based core with a resin binder and indicates that graphite may be added to this sand-and-resin system. Appellant further stated that there is no reason to add graphite to the salt and phosphate composition of SU 1,196,096 or Anderko as modified with Melling

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because graphite is used in the sand and resin composition of Halpern. However, in Halpern the purpose of adding parting agent, such as graphite, to the foundry mix is to reduce or prevent interaction between the molten metal and the surface of the mold and core, and thus to prevent the molding material from sticking to the cast product and thereby to facilitate the removal of mold and core from the cast product. Further, since the interaction between the molten metal and the surface of mold and core is reduced or prevented, a cast product with a smooth surface may be obtained. Thus, it would have been obvious to adapt the concept of adding parting agent to foundry mix, as taught by Halpern, in any casting system, such as the water-soluble core of SU '196 or Anderko as modified with Melling, to facilitate the foundry process.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Kuang Y. Lin/
Primary Examiner, Art Unit 1793

Conferees:

Jessica Ward

/Jessica L. Ward/

Supervisory Patent Examiner, Art Unit 1793

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